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TITLE: Reduction in Liver Transplant Wait-Listing in the Era of Direct Acting Anti-Viral Therapy

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ABSTRACT BODY:

Abstract Body: Recent approval of direct-acting antiviral (DAA) therapy for patients with decompensated cirrhosis (DC) secondary to hepatitis C (HCV) is associated with improved hepatic function. We analyzed trends in liver transplant (LT) wait-listing (WL) to explore the potential impact of effective medical therapy on WL registration. This is a cohort study using the Scientific Registry of Transplant Recipients database from 2003-2015. 47,591 adults wait-listed for LT due to HCV, hepatitis B (HBV) and non-alcoholic steatohepatitis (NASH) were identified. LT indication was defined as DC if the model for end-stage liver disease (MELD) at WL was ≥ 15 or hepatocellular carcinoma (HCC). Era of listing was divided into “interferon” ([IFN] 2003-2010), “protease inhibitor” ([PI] 2011-2013), and “direct-acting antiviral” ([DAA] 2014-2015). Annual standardized incidence rates (ASIR) of WL were analyzed using Poisson regression. Adjusted incidences of LT WL for DC in HCV patients decreased by 5% in the PI era (P = 0.004) and 32% in the DAA era (P < .001) compared to the IFN era. Listing for DC in HBV also decreased in the PI (-17%, P = 0.002) and DAA eras (-24%, P < .001). Conversely, WL for DC in NASH increased by 41% in the PI era (P < .001) and 81% in the DAA era (P < .001). In 2015, the ASIR of LT WL for DC in NASH was equal to that of HCV (2.80/100,000 vs. 2.73/100,000 respectively). WL for HCC in both the HCV and NASH populations increased in both PI and DAA eras (P <.001 for all) while HCC WL in HBV remained stable (P > 0.05 for all). Conclusions: The rate of LT WL for HCV complicated by DC has decreased by over 30% in the era of DAA therapy and is now equal to that of NASH. Further reductions in WL are anticipated with increased testing, linkage to care, and access to DAA therapy.
Figure: Annual standardized incidence rates (ASIR) of LT wait-listing per 100,000 US population by etiology of liver disease and indication for wait-listing. X-axis is the year of LT wait-listing registration. PI: protease inhibitor; DAA: direct acting antiviral.
IMAGE CAPTION: Figure: Annual standardized incidence rates (ASIR) of LT wait-listing per 100,000 US population by etiology of liver disease and indication for wait-listing. X-axis is the year of LT wait-listing registration. PI: protease inhibitor; DAA: direct acting antiviral

(no table selected)

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